NATIONAL CURRICULUM IN REPRODUCTIVE PSYCHIATRY

Substance Use Disorders

Opioid Use Disorder

Self-Study

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How common is OUD in pregnancy?

- In 2007, 22.8% of women who were enrolled in Medicaid programs in 46 states filled an opioid prescription during pregnancy *(Desai RJ, Hernandez-Diaz S, Bateman BT, Huybrechts KF. Increase in prescription opioid use during pregnancy among Medicaid-enrolled women. Obstet Gynecol 2014;123:997–1002)*.
- In a study looking at hospital discharge diagnostic codes, antepartum maternal opioid use increased nearly fivefold from 2000 to 2009 (*Patrick SW, Schumacher RE, Benneyworth BD, Krans EE, McAllister JM, Davis MM. Neonatal abstinence syndrome and associated health care expenditures: United States, 2000–2009. JAMA 2012;307:1934–40*)
- Pregnancy-related deaths due to opioid misuse more than doubled between 2007 and 2016, from 4% to 10% (*Gemmill et al, "Trends in pregnancy-associated mortality involving opioids in the United States, 2007–2016", AJOG 220(1) 115-116*)

What are risk factors for OUD in pregnancy?

- Rates of substance use during pregnancy do NOT seem to be influenced by race, social class, or age (*Hans SL. "Demographic and psychosocial characteristics of substance abusing pregnant women." Clin Perinatol. 1999 Mar;26(1):55-74.)*
- Adverse childhood experiences (ACE): women with 5 or more ACES are 7-10x more likely to engage in illicit drug use, addiction, and IVDU (*Dube, S. R., Felitte, V. J., Dong, M., Chapman, D. P., Giles, W. H., Anda, R., F. (2003). Childhood abuse, neglect and household dysfunction and risk of illicit drug use: The Adverse Childhood Experiences Study. Pediatrics, (111)3, 564-72*)
- Childhood sexual abuse: women who've experienced any sort of sexual abuse in childhood are 3X more likely than non-abused girls to report drug dependence in adulthood (*Anda, R. F., Dong, M., Brown, D. W., Felitti, V. J., Giles, W. H., Perry, G. S., Valerie, E. J., & Dube, S. R. (2009). The relationship of Adverse Childhood Experiences to a history of premature death of family members. BioMed Central Public Health, 106(9), doi:10.1186/1471-2458-9-106*)
- Genetics, in combination with environmental factors, account for 40% to 60% of a person's vulnerability of substance use disorders (*Kendler, K.S., et al. (2000). Childhood sexual abuse and adult psychiatric and substance use disorders in women: An epidemiological and co-twin control analysis. Archives of General Psychiatry 57(10), 953-959*)
- In women, ovarian steroid hormones, metabolites of progesterone, and negative allosteric modulators of the y-aminobutyric acid A (GABA-A) receptor, such as dehydroepiandrostenedione (DHEA), may influence the effects of drugs and result in an accelerated progression of initiation to dependency known as telescoping (*Greenfield, S. F., Beck, S. E., Lawson, K., Brady, K. T. (2010). Substance Abuse in Women. The Psychiatric Clinics of North America, 33(2), 339-335. doi: 10.1016/j.psc.2010.01.004*)
- Problematic relationships in families with a substance-misusing parent raises concerns about intergenerational transmission of problematic parenting behavior (*Hans SL. "Demographic and psychosocial characteristics of substance abusing pregnant women." Clin Perinatol. 1999 Mar;26(1):55-74.)*
- Unsurprisingly given the above RFs for substance use disorder, women with SUDs often also experience other psychiatric co-morbidities such as mood disorders and complex trauma. (*Quello et al. "Mood Disorders and Substance Use Disorder: A Complex Comorbidity." Sci Prac Perspect. 2005.*) These then increase the difficulties women may face in recovery.

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What are non-judgmental ways to discuss substance use during pregnancy?

- Ask in a confidential setting
- Ask universally
- Listen with empathy and respect
- Discuss addiction as a chronic disease
- Avoid stigmatizing words such as “abuse,” “addict,” “rehab,” “relapse,” or “dirty” or “clean” (in reference to drug screens). Try instead more value neutral words like “substance use disorder,” “substance misuse,” “risky use,” “addiction,” “individual with substance use disorder,” “treatment,” “recovery,” “recurrence of use,” “positive” drug screen results, etc.
- Use motivational interviewing techniques when making treatment plans

What validated screening questionnaires exist for OUD and/or substance use disorders in pregnancy?

4P’s
Parents: Did any of your parents have a problem with alcohol or other drug use?
Partner: Does your partner have a problem with alcohol or drug use?
Past: In the past, have you had difficulties in your life because of alcohol or other drugs, including prescription medications?
Present: In the past month have you drunk any alcohol or used other drugs?

Ewing H. A practical guide to intervention in health and social services with pregnant and postpartum addicts and alcoholics: theoretical framework, brief screening tool, key interview questions, and strategies for referral to recovery resources. Martinez (CA): The Born Free Project, Contra Costa County Department of Health Services; 1990

NIDA Quick Screen
Step 1. Ask patient about past year drug use

***Quick Screen* Question:** **In the past year, how often have you used the following?**	**Never**	**Once or Twice**	**Monthly**	**Weekly**	**Daily or Almost Daily**
Alcohol • **For men, 5 or more drinks a day** • **For women, 4 or more drinks a day**					
Tobacco Products					
Prescription Drugs for Non-Medical Reasons					
Illegal Drugs					

Step 2. Begin NIDA-Modified ASSIST
Step 3. Determine risk level
Conduct brief intervention
Step 4. Advise, Assess, Assist and Arrange

National Institute on Drug Abuse. https://www.drugabuse.gov/publications/resource-guide-screening-drug-use-in-general-medical-settings/nida-quick-screen

CRAFFT (For Adolescents)
C Have you ever ridden in a CAR driven by someone who was high or had been using alcohol or drugs?
R Do you ever use alcohol or drugs to RELAX, feel better about yourself, or fit in?
A Do you ever use alcohol or drugs while you are by yourself or ALONE?
F Do you ever FORGET things you did while using alcohol or drugs?
F Do your FAMILY or friends ever tell you that you should cut down on your drinking or drug use?
T Have you ever gotten in TROUBLE while you were using alcohol or drugs?

Center for Adolescent Substance Abuse Research, Children’s Hospital Boston. The CRAFFT screening interview. Boston (MA): CeSAR; 2009. Available at: http://www.ceasar.org/CRAFFT/pdf/CRAFFT_English.pdf.

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What are the differences between opioid use, opioid misuse, and opioid use disorder?

- Opioid use: Refers simply to the act of taking an opioid. For example, a patient with sickle cell disorder may require the use of opioids during her pregnancy for a pain crisis.
- Opioid misuse: Denotes that the opioid is being used in a problematic manner but does not rise to the level of a diagnosed disease. Misuse includes using medications without a prescription or using medications not as prescribed (eg, higher doses, longer duration, for conditions different than the original prescribed condition). For example, a pregnant patient complains to her mother that she is having excruciating back pain in pregnancy. In response, the mother gives the patient an old tablet of Percocet she had left over from a wisdom tooth extraction, and the patient takes the Percocet over the next few days.
- Opioid use disorder: Per the DSM-5, defined as at least 2 of the following symptoms over a 12 month period.

Table. DSM-5 Diagnostic Criteria for Opioid Use Disorder[a]
1. Opioids are taken in larger amounts or duration than intended
2. Persistent desire/unsuccessful efforts to cut down or control opioid use
3. A great deal of time is spent obtaining, using, or recovering from the effects of opioids
4. Craving
5. Recurrent use of opioid results in failure to fulfill major role obligations at work, school, or home
6. Continued use despite social/interpersonal substance-related problems
7. Important social, occupational, or recreational activities are given up or reduced because of substance use
8. Recurrent use in hazardous situations
9. Continued use despite knowledge of having a persistent or recurrent opioid-related physical or psychological problem that is likely caused or exacerbated by opioid use
10. Tolerance[b]
11. Withdrawal[b]
Severity: Mild: 2-3 symptoms, Moderate: 4-5 symptoms, Severe: ≥ 6 symptoms

[a] The information above is only an overview of the criteria used. Consult the DSM-5 before making a diagnosis.
[b] Note: This criterion is not considered to be met for patients taking opioids solely under appropriate medical supervision
Source: American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*, 5th ed. Washington, DC: American Psychiatric Association; 2013:541.

- It is also helpful to keep in mind the ASAM's definition of addiction:
  "Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry. Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations. This is reflected in an individual pathologically pursuing reward and/or relief by substance use and other behaviors.

  Addiction is characterized by inability to consistently abstain, impairment in behavioral control, craving, diminished recognition of significant problems with one's behaviors and interpersonal relationships, and a dysfunctional emotional response. Like other chronic diseases, addiction often involves cycles of relapse and remission. Without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death."

What are confidentiality rules concerning substance use treatment?

- Unauthorized disclosures of patient records relating to substance use treatment is protected under federal laws and regulations found at 42 CFR (Code of Federal Regulations) Part 2. These laws were enacted to encouraged individuals with SUD to enter and remain in treatment without fear of reprisal.
- 42 CFR goes beyond HIPPA (Health Insurance Portability and Accountability Act). It prevents treatment programs from releasing patient SUD information to law enforcement agencies or judicial/administrative bodies without a special court order. Additionally, anyone who receives patient-identifying SUD information through a patient consent or other Part 2 requirements cannot re-disclose this information to anyone else – unless the patient provides written consent to do so, a court order exists, or if an exception to Part 2 regulation applies.

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- Exceptions to Part 2 include
  - Medical emergencies, 42 CFR § 2.51
  - Child abuse or neglect reports required by state law, 42 CFR § 2.12(c)(6)
  - Reporting a patient's crime on program premises or against program personnel, 42 CFR § 2.12(c)(5)
  - Qualified audit or evaluation of the program, 42 CFR § 2.53
  - Research requests, 42 CFR § 2.52
  - Qualified Service Organization Agreements, 42 CFR § 2.12(c)(4)
  - Court orders authorizing disclosure and use of the patient record
- For emergency personnel who are treating a pregnant woman in the event of an overdose or other life-threatening situation, Part 2 generally does not apply because these providers do not meet the definition of a Part 2 program (which implies the principal practice of the provider is SUD treatment). However, given the stigma surrounding SUD, it is suggested that emergency personnel ask the patient's permission for information sharing if the patient has the capacity to make healthcare decisions. If the patient lacks capacity (eg, is unconscious), the provider should share information about the patient with family and close friends only if the provider determines that doing so is in the best interest of the patient.

Sources:

https://lac.org/addiction-confidentiality-42-cfr-part-2-important/

https://www.samhsa.gov/about-us/who-we-are/laws-regulations/confidentiality-regulations-faqs

What would a comprehensive treatment approach for perinatal OUD look like?

- Treatment Modalities: Perinatal OUD is treated with a comprehensive treatment approach that includes prenatal care, pharmacotherapy for OUD, evidence-based behavioral interventions, treatment of co-morbid mental health problems, and addressing psychosocial stressors. *(Substance Abuse and Mental Health Services Administration (SAMHSA). Center for substance abuse treatment: Clinical Guidance for treating pregnant and parenting women with opioid use disorder and their infants: (SMA) 18-5054. Published 2018. https://store.samhsa.gov/system/files/sma18-5054.pdf)*
- Treatment Setting: A multi-disciplinary collaborative care model where addiction and prenatal services are integrated or at least co-located is ideal. If this type of treatment center is not available however referral to needed services with close follow-up to ensure that the patient has accessed services is important. *(Substance Abuse and Mental Health Services Administration (SAMHSA). Center for substance abuse treatment: A collaborative approach to the treatment of pregnant women with opioid use disorder (SMA) 16-4978 https://store.samhsa.gov/system/files/sma16-4978.pdf)*
- Treatment Environment: The vast majority of women with substance use have significant histories of trauma, and healthcare providers that are trained in trauma-informed care can create a safe environment for these patients that enhance rapport and engagement in treatment. *(Substance Abuse and Mental Health Services Administration (SAMHSA). Center for substance abuse treatment: Addressing the specific needs of women. treatment improvement protocol (TIP) series, no. 51. HHS publication no. (SMA) 15-4426. rockville, MD: Center for substance abuse treatment, 2009. https://store.samhsa.gov/shin/content/SMA15-4426/SMA15-4426.pdf. Published 2009. Updated HHS Publication No. (SMA) 15-4426])*
- Reporting Requirements: Some states require that the Department of Child and Family Services be notified if a woman is using drugs during pregnancy. In some states it is illegal to use drugs during pregnancy and doing so can result in arrest or removal of child custody. It is important to know your states reporting requirements and laws related to drug use in pregnancy. A helpful resource is: https://projects.propublica.org/graphics/maternity-drug-policies-by-state

What behavioral interventions are recommended for perinatal OUD?

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- Psychosocial interventions that have been evaluated for the treatment of perinatal substance use disorders in general include contingency management (CM), motivational interviewing based (MIB) techniques, family therapy, cognitive behavioral therapy (CBT).
- CM and CBT have the greatest evidence base for the treatment of perinatal OUD. CM uses positive reinforcement with incentives to reward pre-determined substance use behaviors such as treatment adherence, drug abstinence etc. MIB is patient-centered counseling that helps patients resolve uncertainty about cessation of drug use and treatment. CBT helps patients recognize the interplay between their thoughts, emotions and behaviors and provides techniques to make thoughts more accurate so that emotions are consistent with an accurate view of reality. Patients also engage in reinforcing and pleasurable activities regularly.
- Contingency management has the greatest evidence base for the reduction of opioid use in pregnant women. However implementation of reinforcements, particularly financial incentives, can be challenging.
- Peer support specialists, recovery coaches and/or 12-step facilitated programs can be helpful in recovery. These organizations are set-up and run by volunteers who are in recovery. It is important to select a 12-step group or peer support specialists or a recovery coach that supports pharmacotherapy for OUD. All women 12-step recovery groups can also be a good environment for women to seek support in their recovery.

Sources:

Terplan M, Ramanadhan S, Locke A, Longinaker N, Lui S. Psychosocial interventions for pregnant women in outpatient illicit drug treatment programs compared to other interventions. Cochrane Database of Systematic Reviews 2015, Issue 4. Art. No.: CD006037. DOI: 10.1002/14651858.CD006037.pub3

Jones, H. E., K. Deppen, M. L. Hudak, L. Leffert, C. McClelland, L. Sahin, J. Starer, M. Terplan, J. M. Thorp, Jr., J. Walsh, and A. A. Creanga. 2014. "Clinical care for opioid-using pregnant and postpartum women: the role of obstetric providers." *Am J Obstet Gynecol* 210 (4):302-310. doi: 10.1016/j.ajog.2013.10.010.

Substance Abuse and Mental Health Services Administration (SAMHSA). Center for substance abuse treatment: Clinical Guidance for treating pregnant and parenting women with opioid use disorder and their infants: (SMA) 18-5054. Published 2018. https://store.samhsa.gov/system/files/sma18-5054.pdf

What medication assisted treatment (MAT) options are favored during pregnancy and why?

Methadone or Buprenorphine

- Pharmacotherapy for perinatal OUD should be offered to all women and includes Methadone or Buprenorphine (or combined Buprenorphine/Naloxone). Medically supervised withdrawal is not recommended for pregnant women with OUD as it is associated with high rates of return to substance use. *(Substance Abuse and Mental Health Services Administration (SAMHSA). Center for substance abuse treatment: Clinical Guidance for treating pregnant and parenting women with opioid use disorder and their infants: (SMA) 18-5054. Published 2018. https://store.samhsa.gov/system/files/sma18-5054.pdf)*
- Neither Buprenorphine or Methadone is formally approved by the U.S. Food and Drug Administration for the treatment of opioid use disorder in pregnancy although both are approved for the treatment of opioid use disorder. Methadone, a full opioid agonist, has been used in pregnancy since the 1970s and became the standard of care in the late 1990s. Buprenorphine, a partial opioid receptor agonist, now provides an additional treatment option for the treatment of perinatal opioid use disorder. *(US Department of Health and Human Services, National Institutes of Health: Consensus development conference statement effective medical treatment of opiate addiction. Nov 17–19, 1997. Available at: https://consensus.nih.gov/1997/1998TreatOpiateAddiction108html). (Jones, H.E., Kaltenbach, K., Heil, S.H., Stine, S.M., Coyle, M.G., Arria, A.M., O'Grady, K.E., Selby, P., Martin, P.R., Fischer, G: Neonatal abstinence syndrome after methadone or buprenorphine exposure. N. Engl. J. Med. 363, 2320–2331, 2010)*
- A recent Cochrane review of studies comparing the efficacy of Methadone verses Buprenorphine for the treatment of perinatal opioid use disorder did not conclude that one pharmacotherapy is superior to the other (*Minozzi, Amato, Vecchi, and Davoli 2013*). While there is some evidence to suggest that women receiving Methadone were more likely to be retained in treatment and women receiving Buprenorphine had a lower risk for preterm birth, and had newborns with greater birth weight, larger head circumference and

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less severe Newborn Opioid Withdrawal Syndrome, (*Brogly et al., 2014; Jones et al., 2010; Zelder et al., 2016*), the body of evidence is too small to draw definitive conclusions (*Minozzi, Amato, Vecchi, and Davoli 2013*).

- The selection of Methadone verses Buprenorphine is largely driven by patient preference, feasibility, and prior treatment response. Clinical guidelines suggest that good candidates for treatment with Methadone are those with severe addiction, or unsuccessful abstinence from drug use with Buprenorphine or those that would benefit from the structure and support of daily-observed therapy at a Methadone treatment center. *(Substance Abuse and Mental Health Services Administration (SAMHSA). Center for substance abuse treatment: Clinical Guidance for treating pregnant and parenting women with opioid use disorder and their infants: (SMA) 18-5054. Published 2018. https://store.samhsa.gov/system/files/sma18-5054.pdf)*
- Women that are able to adhere to outpatient therapy with less structure are typically good candidates for Buprenorphine. Buprenorphine may be a good first choice for patients that are naïve to pharmacotherapy for OUD and do not have contradictions to this medication, as converting from Methadone to Buprenorphine can be very difficult and is often unsuccessful. *(Substance Abuse and Mental Health Services Administration (SAMHSA). Center for substance abuse treatment: Clinical Guidance for treating pregnant and parenting women with opioid use disorder and their infants: (SMA) 18-5054. Published 2018. https://store.samhsa.gov/system/files/sma18-5054.pdf)*
- Below is a table that describes patient eligibility, counseling and education with methadone or buprenorphine. *(Boyars, L., Guille C. (2018) Treatment of Perinatal Opioid Use Disorder. Obstet Gynecol Clin North Am. 45(3): 511-524.)*

Buprenorphine or Buprenorphine/Naloxone

- Buprenorphine vs. Buprenorphine/Naloxone: Historically, pregnant women who had been on buprenorphine/naloxone were transitioned to the buprenorphine-only product for the remainder of pregnancy. Women starting pharmacotherapy for OUD were started on the buprenorphine-only product. The main reason for using the buprenorphine-only product was to protect the fetus from exposure to naloxone and concern for precipitated withdrawal in pregnancy in a woman who injects the combination product. *(Substance Abuse and Mental Health Services Administration (SAMHSA). Center for substance abuse treatment: Clinical Guidance for treating pregnant and parenting women with opioid use disorder and their infants: (SMA) 18-5054. Published 2018. https://store.samhsa.gov/system/files/sma18-5054.pdf)*
- Although data is limited, increasing evidence suggests that newborn outcomes are not negatively affected by buprenorphine/naloxone, and therefore the combined product is increasingly being used in pregnancy. The decision to use the combination vs. mono-product is dependent on the benefit vs. risk to the dyad. *(Substance Abuse and Mental Health Services Administration (SAMHSA). Center for substance abuse treatment: Clinical Guidance for treating pregnant and parenting women with opioid use disorder and their infants: (SMA) 18-5054. Published 2018. https://store.samhsa.gov/system/files/sma18-5054.pdf)*
- When deciding between Buprenorphine vs. Buprenorphine/Naloxone providers and patients will want to consider the limited safety information and/or theoretical risk of fetal exposure to naloxone in pregnancy and weigh these risks against any potential risks with the buprenorphine-only product. Patients and providers may want to consider the potential risk of misuse with the buprenorphine-only product, or potential for pregnant women to be targeted for theft of medication given that it is well known that pregnant women are often prescribed the buprenorphine-only product. The transition back to the combined product in the postpartum period can also prove challenging in terms of determining the best time of transition and difficulties with tolerating a new preparation of medication. It is also important to consider the treatment setting. In intensive outpatient or group settings women may share which medication they are taking and inconsistencies across patients may be perceived as unfair. Either way the risks of Buprenorphine vs. Buprenorphine/Naloxone need to be discussed so that women are making an informed treatment decision about these medications.

Extended Release Injectable Naltrexone and Oral Naltrexone

- There is insufficient information about the maternal efficacy and fetal and newborn safety of extended-release injectable naltrexone during pregnancy. If women choose to discontinue naltrexone injections in

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pregnancy, they should be offered Methadone or Buprenorphine. *(Substance Abuse and Mental Health Services Administration (SAMHSA). Center for substance abuse treatment: Clinical Guidance for treating pregnant and parenting women with opioid use disorder and their infants: (SMA) 18-5054. Published 2018. https://store.samhsa.gov/system/files/sma18-5054.pdf)*

- Clinical data utilizing oral Naltrexone for the treatment for opioid use disorder during pregnancy is available, and overall does not appear to associate with poor birth outcomes, however interpretation of these data are limited by small sample size, lack of control groups, or minimal control for confounding variables. Further, long-term studies evaluating child development are not available.
  (Hulse G, O'Neil G. Using naltrexone implants in the management of the pregnant heroin user. Aust N Z J Obstet Gynaecol 2002; 42(5): 569–73.)
  (Hulse GK, Arnol-Reed DE, O'Neil G, et al. Naltrexone implant and blood naltrexone levels over pregnancy. Aust N Z J Obstet Gynaecol 2003; 43(5): 386–8.)
  (Hulse GK, O'Neil G, Arnold-Reed DE. Methadone maintenance vs. implantable naltrexone treatment in the pregnant heroin user. Int J Gynaecol Obstet 2004; 85(2): 170–1.)
  (Hulse GK, O'Neill G, Pereira C, et al. Obstetric and neonatal outcomes associated with maternal naltrexone exposure. Aust N Z J Obstet Gynaecol 2001; 41(4): 424–8.)
  (Kelty E, Hulse G. A retrospective cohort study of birth outcomes in neonates exposed to naltrexone in utero: A comparison with methadone-, buprenorphine, and non-opioid exposed neonates. Drugs 2017; DOI 10.1007/s40265-017-0763-8.)

What are pregnancy-unique considerations in the application of MAT?

- Due to the physiological changes in pregnancy, the dose of Methadone or Buprenorphine will often need to be increased in order to prevent the emergence of withdrawal symptoms or increased cravings. Dose adjustments, including increasing the dose or splitting the dose (e.g., BID), should be individualized based on patient assessment of increased cravings or withdrawal symptoms.
- The dose of Methadone or Buprenorphine used to treat perinatal OUD is not associated with the likelihood of Newborn Opioid Withdrawal Syndrome (NOWS) or severity of NOWS. However, tobacco use is associated with the degree of NOWS the baby may experience and therefore counseling regarding smoking cessation should be included in your overall treatment of women with perinatal OUD and tobacco use.

Source:

Substance Abuse and Mental Health Services Administration (SAMHSA). Center for substance abuse treatment: Clinical Guidance for treating pregnant and parenting women with opioid use disorder and their infants: (SMA) 18-5054. Published 2018. https://store.samhsa.gov/system/files/sma18-5054.pdf

What might shared decision making look like when discussing OUD with a pregnant patient?

- Prior to starting pharmacotherapy or continuing pharmacotherapy for perinatal OUD, patient education should be provided regarding the risks and benefits of each of these medications as well as the risks of medically supervised withdrawal. A shared-decision making tool is available for providers to review with patients that details the maternal, fetal and newborn risks of Methadone or Buprenorphine and medically assisted withdrawal and provides a structured framework to help assist in making a decision to either start/continue Methadone or Buprenorphine or undergo medically supervised withdrawal of these medications.
- This shared-decision making tool describes the maternal, fetal and newborn risks associated with the use of Methadone and Buprenorphine as well as the risk of tapering one of these medications or choosing not to take one of these medications during pregnancy. The tool then provides a section for patients to individualize this decision based on their prior response to these medications, prior history of relapse and patient preference. The tool aims to facilitate informed treatment choices that are in line with women's preferences and values. *(Guille, C., Jones, H., Abuhamad A., Brady KT. Shared-Decision Making Tool for*

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the Treatment of Perinatal Opioid Use Disorder. 2019. Psychiatric Research and Clinical Practice- In Advance.)

- Link to tool in online supplement: *https://prcp.psychiatryonline.org/doi/suppl/10.1176/appi.prcp.20180004/suppl_file/appi.prcp.20180004.ds001.pdf.*
- The majority of women (95%) using this shared-decision making tool with their provider arrived at a treatment decision regarding their medication choice. Women agreed that they were provided with sufficient information, outcome probabilities and decisional guidance in order to make an informed treatment decision. Further women reported that their treatment choice reflected their values and preferences. *(Guille, C., Jones, H., Abuhamad A., Brady KT. Shared-Decision Making Tool for the Treatment of Perinatal Opioid Use Disorder. 2019. Psychiatric Research and Clinical Practice- In Advance)*.
- Link to tool Reference: *https://prcp.psychiatryonline.org/doi/pdf/10.1176/appi.prcp.20180004*
- One of the well-known consequences of chronic opioid use is Newborn Opioid Withdrawal Syndrome (NOWS) [also called neonatal abstinence syndrome (NAS)], which is a type of neonatal drug withdrawal syndrome. NOWS can occur after illicit opioid use (eg, heroin) or as an expected outcome from opioid agonist treatment (eg, methadone and buprenorphine). *(Jones HE, Kaltenbach K, Heil SH, et al. Neonatal abstinence syndrome after methadone or buprenorphine exposure. N Engl J Med. 2010;363 (24):2320-2331.*)
- NOWS was recently associated with high rates of long-term unemployment and the lack of mental health care providers in in the US. *(Patrick SW, Faherty LJ, Dick AW, Scott, TA, Dudley J, Stein BD. Association among County-Level Economic Factors, Clinician Supply, Metropolitan or Rural Location and Neonatal Abstinence Syndrome. JAMA. 2019;321(4):385-393.)*
- It is critically important that the risk of NOWS associated with Methadone or Buprenorphine is not the only risk factor is considered. As the risk of not taking this medication is also associated with high rates of relapse on opioids, which also have a high risk of NOWS. The shared decision tools assists patients and providers in weighing multiple risks for the individuals in a more balanced way.
- This decision aid can be reviewed throughout pregnancy and updated as new information about the patient's treatment and recovery from Opioid Use Disorder becomes available.

How does OUD in pregnancy affect the mother and child?

- For mothers
    - Less likely to receive adequate prenatal care (*Roberts SC, Pies C. Complex calculations: how drug use during pregnancy becomes a barrier to prenatal care. Maternal Child Health Journal. 2011;15(3):333-41.)*
    - Mothers themselves have increased odds of experiencing cardiac arrest, Cesarean section, and increased length of hospital stay. Intravenous drug users may suffer from skin and soft tissue infections, osteomyelitis, endocarditis, and sepsis. Co-infection with hepatitis B virus, hepatitis C virus, and human immunodeficiency virus is also more likely with injecting drug use (*Bart G. Maintenance Medication for Opiate Addiction: The Foundation of Recovery. Journal of addictive diseases. 2012;31(3):207-225.*)
    - More likely to have psychiatric comorbidities and misuse other substances (*Smith MV, Costello D, Yonkers KA. Clinical correlates of prescription opioid analgesic use in pregnancy. Maternal and Child Health Journal. 2015;19(3):548-56.*)
    - Mental health problems are frequently comorbid with opioid use and are also a risk factor for opioid misuse. Pregnant women with depressive and anxiety symptoms are 2 times more likely to use opioids, compared to pregnant women without depressive or anxiety symptoms. *(Faherty LJ, Matone M, Passarella M, Lorch S. Mental health of mothers of infants with neonatal abstinence syndrome and prenatal opioid exposure. Matern Child Health J. 2018;22(6):841-848)*
    - More likely to suffer from legal ramifications of violence, prostitution, and theft. They have high rates of poverty, intimate partner violence, and physical or sexual abuse (*Kremer, M. E., & Arora, K. S. Clinical, ethical, and legal considerations in pregnant women with opioid abuse. Obstetrics and Gynecology. 2015;126(3), 474-478.*)

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- Tobacco use disorder is common among pregnant women with OUD; 88-96% of pregnant women receiving pharmacotherapy for OUD also have a tobacco use disorder. *(Akerman SC, Brunette MF, Green A., Goodman DJ, Blunt HB, Heil S. Treating tobacco use disorder in pregnant women in medication-assisted treatment for an opioid use disorder: a systematic review. Journal of Substance Abuse Treatment. 2015; 52:40-47.)*
- The primary treatment for perinatal smoking cessation and relapse prevention are behavioral interventions such as motivational interviewing or contingency management which have shown modest success in reducing smoking or relapse to tobacco use. Contingency management with financial incentives appears to be the most effective for smoking cessation during pregnancy. *(Akerman SC, Brunette MF, Green A., Goodman DJ, Blunt HB, Heil S. Treating tobacco use disorder in pregnant women in medication-assisted treatment for an opioid use disorder: a systematic review. Journal of Substance Abuse Treatment. 2015; 52:40-47.)* Consider linking to tobacco in pregnancy self-study document.
- Pharmacotherapies for nicotine cessation for non-pregnant populations include Nicotine Replacement Therapy (NRT), Bupropion, Varenicline and Electronic Nicotine Delivery System (ENDS). No studies to date have examined the efficacy of Varenicline or ENDS for pregnant women with nicotine use disorder and only 1 study has examined Bupropion. Eight randomized controlled trials have evaluated NRT for perinatal smoking cessation. Given the lack of efficacy from these studies, NRT it is not routinely recommended for pregnant women with nicotine use disorder. However, women with a history of being able to abstain from tobacco use with NRT may want to consider the use of NRT during pregnancy after carefully weighing the risks of continued nicotine use compared to the use of NRT. *(Coleman T, Chamberlain C, Davey MA, et al: Pharmacological interventions for promoting smoking cessation during pregnancy. Cochrane Database Syst Rev 12:CD010078, 2015.)*

- For children
  - Opioid use in the 1st trimester was statistically significantly associated with conoventricular septal defects (OR, 2.7; 95% CI, 1.1–6.3), atrioventricular septal defects (OR, 2.0; 95% CI, 1.2–3.6), hypoplastic left heart syndrome (OR, 2.4; 95% CI, 1.4–4.1), spina bifida (OR, 2.0; 95% CI, 1.3–3.2), and gastroschisis (OR, 1.8; 95% CI, 1.1–2.9) in infants (*Maternal treatment with opioid analgesics and risk for birth defects. Broussard, Cheryl S. et al. American Journal of Obstetrics & Gynecology , Volume 204 , Issue 4 , 314.e1 - 314.e11)*
  - Their deliveries are more likely to be complicated by intrauterine growth restriction, preterm birth, placental abruption, premature preterm rupture of membranes, oligohydramnios, and stillbirth *(Maeda A, Bateman BT, Clancy CR, Creanga AA, Leffert LR. Opioid abuse and dependence during pregnancy: temporal trends and obstetrical outcomes. Anesthesiology. 2014;121(6):1158-65*)
  - The baby may be at risk for developing neonatal opioid withdrawal syndrome (NOWS), which is a constellation of withdrawal signs in the neonate including central nervous system dysfunction (e.g., seizures, exaggerated moro reflex, increased muscle tone, irritability), gastrointestinal dysfunction (e.g., vomiting, diarrhea, poor weight gain/feeding), and respiratory dysfunction (*Farid W., Dunlop S., Tait R., Hulse G. The Effects of Maternally Administered Methadone, Buprenorphine and Naltrexone on Offspring: Review of Human and Animal Data. Current Neuropharmacology. 2008;6(2):125-150*.)
  - Children raised in substance-misusing environments are vulnerable to toxic stress which results in problems such as depression, anxiety, post traumatic stress disorder (PTSD), behavioral and learning difficulties, and significant attachment problems (*Lander L, Howsare J, Byrne M. The Impact of Substance Use Disorders on Families and Children: From Theory to Practice. Social work in public health. 2013;28(0):194-205*)

What are risk factors for overdose?

- Use of highly potent opioids such as fentanyl
- Use of opioids with reduced opioid tolerance (eg, following detoxification, release from incarceration, cessation of treatment)
- Injection drug use

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- Mixing illicit substances (polysubstance abuse)
- Using opioids in combination with other sedating substances such as benzodiazepines
- Using alone (risk factor for lack of rescue)
- A prior history of overdose
- A prior history of suicidality
- Reluctance to call for emergency help (risk factor for lack of rescue)

Symptoms of overdose include:

- Slow or shallow breathing
- Gasping for air when sleeping or weird snoring
- Pupillary changes (pinpoint pupils)
- Pale or blueish skin
- Slow heartbeat
- Low blood pressure
- Won't wake up or respond to stimuli

Sources:
https://www.who.int/substance_abuse/information-sheet/en/
https://www.hri.global/contents/716

How does naloxone work and how it is administered in the event of an overdose?

Is naloxone indicated for the treatment of overdose during pregnancy?

Naloxone is an opioid antagonist that has a high affinity of mu opioid receptors, thereby causing the rapid removal of any drugs bound to these receptors. It can be life-saving in the event of an overdose, and should be administered to anyone suspected of having an opioid-related overdose, including pregnant women.

1 Check to see if they can respond
- Shake them or call their name
- Rub your knuckles hard in the middle of their chest ("sternal rub")

2 Call 9-1-1
- Give the address and location
- If you don't want to mention drugs, say, "Someone has stopped breathing and is unresponsive."

3 Give rescue breaths
- Place the person on their back, head tilted back and chin up
- Make sure there is nothing in their mouth and pinch their nose closed
- Breathe two slow breaths into their lungs, making sure the chest rises

4 Give naloxone
- Follow the instructions for the type you have
- If the person does not respond in 2-5 minutes, give another dose

5 Stay until help arrives
- Continue rescue breathing, one breath every 5 seconds
- The person may start to overdose again when the naloxone wears off, so it is very important to call 911

How do I give naloxone?

Narcan® Nasal Spray

This nasal spray needs no assembly and can be sprayed up one nostril by pushing the plunger.

Nasal spray with assembly

1 Take off yellow caps.

2 Screw on white cone.

3 Take purple cap off capsule of naloxone.

4 Gently screw capsule of naloxone into barrel of syringe.

5 Insert white cone into nostril; **give a short, strong push** on end of capsule to spray naloxone into nose: **ONE HALF OF THE CAPSULE INTO EACH NOSTRIL.**

Push to spray.

6 If no reaction in 2-5 minutes, give second dose.

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